

CLAIMS

1. A method of monitoring the integrity of a flexible pipe for transporting a pressurized fluid in a terminal end-fitting, said pipe comprising, in particular, an internal pressure sheath, plies of tensile armor wires and an outer sheath fastened to the end-fitting, which method consists in monitoring the integrity of the tensile armor plies in the end-fitting by monitoring the change in the twist in the flexible pipe near the end-fitting as phenomenon associated with the disorganization of the armor plies as a result of a fracture of several tensile armor wires inside the end-fitting.

2. The method as claimed in claim 1, wherein the twist in the flexible pipe is monitored by means of at least one strain gauge placed on the external sheath of the pipe.

3. The method as claimed in either of claims 1 and 2 for monitoring a flexible pipe, the end-fitting of which also includes a gas drainage valve, which method consists in monitoring the quantity of gas escaping from the valve.

4. The method as claimed in claim 3, wherein this monitoring is performed by measuring the variation in the discharge frequency and/or in the discharge time.

5. A device for monitoring the integrity of a flexible pipe for transporting a pressurized fluid at a terminal end-fitting, said pipe comprising in particular an internal

pressure sheath, plies of tensile armor wires and an outer sheath that are fastened to the end-fitting, which device comprises means for monitoring the change in a phenomenon associated with the disorganization of the armor plies as a result of a fracture of several tensile armor wires inside the end-fitting, these monitoring means being means for detecting an increase in the twist in the pipe near the end-fitting.

6. The device as claimed in claim 5, wherein said means for detecting an increase in the twist in the pipe comprise strain gauges.

7. The device as claimed in claim 6, wherein the strain gauges are in the form of Bragg grating optical fibers.

8. The device as claimed in any one of claims 5 to 7, wherein said monitoring means include a computing unit that can generate an alarm depending on the anomalies detected.